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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,656	08/07/2006	Naoki Sugiyama	294366US0PCT	9238

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EXAMINER	
HON, SOW FUN	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
11/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/588,656	SUGIYAMA ET AL.	
	Examiner	Art Unit	
	SOPHIE HON	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-16* _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Withdrawn Rejections

1. The 35 U.S.C. 112, 2nd paragraph and 35 U.S.C. 103(a) rejections of claims 1-10 are withdrawn due to Applicant's amendment dated 06/27/08.

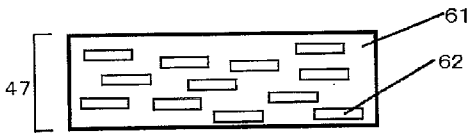
New Rejections

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4, 6-11, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 2001/0022997).

Regarding claims 1, 13-14, in Fig. 3 shown below, Honda teaches a film (resin film 61, Fig. 3, [0034]) which can comprise: (A) cycloolefin resin ([0033]), and (B) particles 62 which can be spindle-like ([0034]), a species of which are needle-like, which have a longer diameter and a shorter diameter and thus exhibit shape anisotropy (Fig. 3, [0034]), and which are orientated substantially parallel to the film plane (parallel to the surface of the resin film, Fig. 3, [0034]). Honda fails to teach an example in which the cycloolefin resin and the inorganic particles are present in the same film.



However, by providing the cycloolefin resin in the list of resins that are suitable for the film resin matrix ([0033]), and the inorganic particle in the list of particles that are suitable as the particle having a different refractive index ([0040]), Honda teaches that the two can be combined in the same film, for the purpose of providing the desired transmittance and reflectance of the incident light (transflector, [0032]).

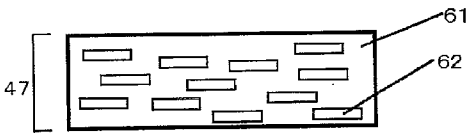
Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have combined the cycloolefin resin and the inorganic particles in the same film of Honda, in order to obtain a film that provides the desired transmittance and reflectance of the incident light, as taught by Honda.

Honda teaches that the inorganic spindle-like particles can be titanium oxide ([0034]), of which needle-like rutile TiO_2 are the most common naturally-occurring species, being the most stable form, which have crystalline properties, and are disclosed as being suitable particles in Applicant's specification (page 83, example 1), and thus are expected to have a refractive index in the longer diameter direction which is larger than the average refractive index in the direction that is perpendicular to the longer diameter direction, exhibiting birefringence. Fig. 3 of Honda, shown on a prior page, show that the inorganic particles 62 are oriented so that the longer diameter direction is parallel to the film plane direction, which means that the film has a difference in refractive index between the film plane direction and the film thickness direction, and hence has retardation properties. Furthermore, Fig. 3 of Honda, shown on a prior page, discloses that the inorganic particles 62 (Fig. 3, [0034]) have a ratio (L/D) of a longer

diameter (L) to a shorter diameter (D) of not less than 2, and that the longer diameter direction of the inorganic particles is arranged substantially parallel to the film plane.

Regarding claim 2, Honda teaches that that phase difference (R0) in the film in-plane direction is in the range of 30 nm or less ([0011]), which overlaps the claimed range of 10 to 1,000 nm.

Regarding claim 3, Honda teaches that the inorganic particles can be titanium oxide ([0034]), of which needle-like rutile TiO_2 are the most common naturally-occurring species, being the most stable form, which have crystalline properties, and are disclosed as being suitable particles in Applicant's specification (page 83, example 1), and thus are expected to have a refractive index in the longer diameter direction which is larger than the average refractive index in the direction that is perpendicular to the longer diameter direction, exhibiting birefringence. Honda teaches that a phase difference (R0) in the film in-plane direction is close to the lower limit of 10 nm (30 nm or less ([0011]). Although Honda is silent regarding the phase difference (Rth) in the film thickness direction, this phase difference (Rth) in the film thickness direction of 10 to 1000 nm is one that is expected to be inherent due to the alignment of the needle-like TiO_2 particles shown below in Fig. 3 of Honda and to depend on the amount of orientation of the film which is done for the purpose of providing the desired amount of optical retardation.



Regarding claim 4, Honda teaches that the inorganic particles (B) can be titanium oxide ([0034]), of which needle-like rutile TiO_2 are the most common naturally-occurring species, being the most stable form, and which have crystalline properties. Honda teaches that the inorganic particles have a particle size of about 0.1 μm ([0034]), which means that an average longer diameter of the particle is within the claimed range of not more than 2 μm.

Regarding claim 6, Fig. 3 of Honda, shown on a prior page, discloses that the inorganic particles are oriented parallel to the surface of the film (Fig. 3, [0034]), which orientation is ordinarily performed by stretching the film.

Regarding claim 7, Honda teaches a laminate film comprising the film which has retardation properties discussed above, and a metal film (providing a metal thin layer on a resin film, in lamination of two or more of these layers, [0032]), wherein the metal can be silver ([0035]), which is inherently conducting, and is transparent (increase transmittance [0035]).

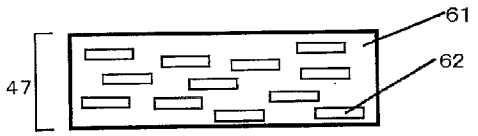
Regarding claim 8, Honda teaches that a polarizing plate (transflective polarizer 71, Fig. 1, [0024]) comprising a film (a) (dichroic polarizer 41, Fig. 1, [0024]), a polarizing film (b) (reflective polarizer 43, Fig. 1, [0024]) and a film (c) (transflector 47, Fig. 1, [0024]) one upon another in this order, wherein film (a) inherently protects polarizing film (b) by being the outer layer, and film (c) is the film that has retardation properties along with transflecting properties, as discussed above.

Regarding claim 9, Honda teaches that the film which has retardation properties as discussed above is disposed in a liquid crystal display device (transflector, [0032], transflective liquid crystal display, [0031]).

Regarding claim 10, Honda teaches that the polarizing plate discussed above is disposed in a liquid crystal display device (transflective polarizer used for a liquid crystal display, [0029]).

Regarding claims 11, Honda teaches that the inorganic particles (B) can be titanium oxide ([0034]), of which needle-like rutile TiO_2 are the most common naturally-occurring species, being the most stable form, which have crystalline properties and are disclosed as being suitable particles in Applicant's specification (page 83, example 1), and thus are expected to have a difference between the refractive index (n_2) in the longer diameter direction and the average refractive index (n_r) perpendicular to the longer diameter direction $n_a - n_r$ that is not less than 0.010.

Regarding claims 15-16, Fig. 3 of Honda shown below, teaches that these inorganic particles (B) (62, [0034]) can have a ratio (L/D) of a longer diameter (L) to a shorter diameter (D) of approximately 5.0.



Although Honda fails to disclose that the ratio (L/D) of a longer diameter (L) to a shorter diameter (D) of these inorganic particles (B) (62, [0034]) can be increased to one that is within the range of 10.0 to 10000, Honda teaches that the inorganic particles (B) can be titanium oxide ([0034]), of which needle-like rutile TiO_2 are the most common

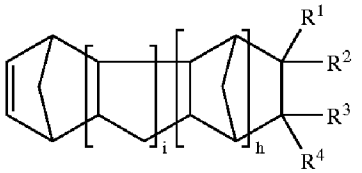
naturally-occurring species, being the most stable form, and which have crystalline properties. These inorganic particles are disclosed as being suitable particles in Applicant's specification (page 83, example 1), and thus are expected to have a ratio (L/D) of a longer diameter (L) to a shorter diameter (D) that is within the claimed range of 10.0 to 10000.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honda as applied to claims 1-4, 6-11, 15-16 above, and further in view of Sekiguchi (US 2004/0057141 A1).

Honda teaches the retardation film comprising (A) a cycloolefin, as discussed above. In addition, Honda teaches that the cycloolefin resin can be a norbornene resin ([0033]), but is silent regarding the specific norbornene resin.

However, Sekiguchi teaches a retardation film comprising a cycloolefin resin that is a norbornene resin, a specific one being the ring-opened polymer ([0059]) of a polycyclic monomer represented by formula (5) shown below, which is the same as formula (1) of Applicant, where R^1 to R^4 are each a hydrogen atom, a halogen atom, a hydrocarbon group of 1 to 30 carbon atoms and may be the same or different, and may be bonded to each other to form a monocyclic or a polycyclic structure, where h = m of Applicant = 0 or 1, and i = p of Applicant = 0 or 1 ([0018, 0051].

(5)



Sekiguchi teaches that the retardation film comprising the specific norbornene resin has excellent optical transparency and optical retardation stability ([0001]).

Therefore, since Honda is silent regarding the type of norbornene resin, it would have been necessary and hence obvious to have looked to the prior art for suitable ones. As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the specific norbornene resin of Sekiguchi as the norbornene resin in the retardation film of Honda, in order to obtain the desired excellence in optical transparency of the resin matrix as well as the desired optical retardation stability, as taught by Sekiguchi.

Response to Arguments

4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's arguments regarding the validity of Honda as the primary reference are addressed in order to advance prosecution. Applicant argues that Honda fails to teach the particular ratio of longer diameter to shorter diameter since Honda does not indicate that his drawings are to scale, instead referring to Fig. 3 as a schematic sectional view, wherein MPEP 2125 explains that the proportions of features in a patent drawing are not evidence of actual proportions when the drawings are not drawn to scale.

Applicant is respectfully apprised that in light of Honda's teaching that the particles can be spindle-like, of which needle-like is a species, the schematic sectional

view of the oriented particles is indeed representative of the approximate ratio of the longer diameter to the shorter diameter of the particles.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks, can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sophie Hon/

Examiner, Art Unit 1794

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794